

# Preface

On behalf of the PROFES organizing committee we would like to welcome you to the 4th International Conference on Product Focused Software Process Improvement (PROFES 2002) in Rovaniemi, Finland. The conference was held on the Arctic Circle in exotic Lapland under the Northern Lights just before Christmas time, when Kaamos (the polar night is known in Finnish as "Kaamos") shows its best characteristics.

PROFES has established itself as one of the recognized international process improvement conferences. Despite the current economic downturn, PROFES has attracted a record number of submissions. A total of 70 full papers were submitted and the program committee had a difficult task in selecting the best papers to be presented at the conference.

The main theme of PROFES is professional software process improvement (SPI) motivated by product and service quality needs. SPI is facilitated by software process assessment, software measurement, process modeling, and technology transfer. It has become a practical tool for quality software engineering and management. The conference addresses both the solutions found in practice and the relevant research results from academia.

The business of developing new applications like mobile and Internet services or enhancing the functionality of a variety of products using embedded software is maturing and meeting the harsh business realities. The necessity for professional software development, quality, and cost effectiveness is becoming evident and there is a need to spread SPI beyond its traditional areas. Therefore, we have encouraged papers and discussions in new application domains in addition to more traditional SPI papers. As a result the conference has a more versatile program than before.

The purpose of the conference is to bring to light the most recent findings and results in the area and to stimulate discussion between researchers, experienced professionals, and technology providers. The large number of participants coming from industry confirms that the conference provides a variety of up-to-date topics and tackles industry problems.

This conference included top keynote speakers: Mike Phillips from SEI and Timo-Pekka Leinonen from Nokia Networks. PROFES also hosted the "Empirical Studies in Software Engineering" Workshop and several pre-conference tutorials, which all added to the value of the conference program.

We wish to thank Fraunhofer IESE, University of Oulu, Infotech, and VTT Electronics for supporting the conference. We are also grateful to the authors for high-quality papers, the program committee for their hard work in reviewing the papers, the organizing committee for making the event possible, the city of Rovaniemi and the University of Rovaniemi for local arrangements, and all the numerous supporters including Finnair who helped in organizing this conference.

Last, but not least, many thanks to Hanna Hulkko, Tarja Luukko, Sari Mäläskä, and Susanna Peltola at VTT Electronics for helping in the review process and in copyediting this volume.

October 2002

Markku Oivo  
Seija Komi-Sirviö

# Conference Organization

## General Chair

Frank Bomarius, Fraunhofer Institut Experimentelles Software Engineering,  
Kaiserslautern (Germany)

## Program Co-chairs

Seija Komi-Sirviö, Fraunhofer Center for Experimental Software Engineering,  
Maryland (USA)  
Markku Oivo, University of Oulu, Oulu (Finland)

## Organizing Chair

Matias Vierimaa, VTT Electronics, Oulu (Finland)

## Tutorial and Workshop Chair

Peter Kaiser, Fraunhofer Institut Experimentelles Software Engineering,  
Kaiserslautern (Germany)

## Publicity Chair

Pasi Kuvaja, University of Oulu, Oulu (Finland)

## USA Area Coordinator

Patricia Larsen, Fraunhofer Center for Experimental Software Engineering,  
Maryland (USA)

## Local Arrangements Chair

Juha Lindfors, University of Lapland, Rovaniemi (Finland)

## Local Industry Coordinator

Ilkka Kamaja, University of Lapland, Rovaniemi (Finland)

## Program Committee

Adriana Bicego, Etnoteam (Italy)  
Andreas Birk, SD&M (Germany)  
Lars Bratthall, ABB (Norway)  
Richard Castanet, Université Bordeaux (France)  
Reidar Conradi, NTNU (Norway)  
Jacky Estublier, Centre National de la Recherche Scientifique (France)  
Ilkka Haikala, Tampere University of Technology (Finland)  
Tua Huomo, Cybelius Software (Finland)  
Hajimu Iida, Nara Institute of Science & Technology (Japan)  
Katsuro Inoue, University of Osaka (Japan)  
Hannu Jaakkola, University of Lapland (Finland)  
Janne Järvinen, Solid Information Technology (Finland)  
Ross Jeffery, University of New South Wales (Australia)  
Erik Johansson, Q-Labs (Sweden)  
Natalia Juristo, Universidad Politecnica de Madrid (Spain)  
Kari Känsälä, Nokia Research Center (Finland)  
Jaana Kuula, Lapinliitto (Finland)  
Mikael Lindval, Fraunhofer, Maryland (USA)  
Kenichi Matumoto, NAIST (Japan)  
Maurizio Morisio, Politecnico di Torino (Italy)  
Paolo Nesi, University of Florence (Italy)  
Risto Nevalainen, STTF (Finland)  
Päivi Parviainen, VTT Electronics (Finland)  
Teade Punter, Fraunhofer IESE (Germany)  
Harri Reiman, Ericsson (Finland)  
Günther Ruhe, University of Calgary (Canada)  
Ioana Rus, Fraunhofer, Maryland (USA)  
Kurt Schneider, Daimler-Chrysler (Germany)  
Veikko Seppänen, University of Oulu (Finland)  
Forrest Shull, Fraunhofer, Maryland (USA)  
Dag Sjøeberg, University of Oslo (Norway)  
Rini van Solingen, CMG (The Netherlands)  
Reijo Sulonen, Helsinki University of Technology (Finland)  
Otto Vinter, Delta (Denmark)  
Giuseppe Visaggio, University of Bari (Italy)  
Yingxu Wang, University of Calgary (Canada)  
Isabella Wiczorek, Fraunhofer IESE (Germany)  
Claes Wohlin, Blekinge Institute of Technology (Sweden)

We would also like to thank the following persons who helped in reviewing the papers: Alessandro Bianchi, Maria Teresa Baldassarre, and Danilo Caivano from the University of Bari; Desmond Greer from Queen's University of Belfast; Erik Arisholm from Simula, Ray Welland from the University of Glasgow, Torgeir

Dingsøy from SINTEF, and Carl Fredrik Sørensen and Alf Inge Wang from NTNU; and Sari Kujala from the Helsinki University of Technology,

Product Focused Software Process Improvement  
4th International Conference, PROFES 2002 Rovaniemi,  
Finland, December 9-11, 2002, Proceedings  
Oivo, M.; Komi-Sirviö, S. (Eds.)  
2002, XVI, 652 p., Softcover  
ISBN: 978-3-540-00234-5